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Andersen

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4,931,355 A	6/1990	Radwanski et al.	
4,997,607 A	• 3/1991	Napper et al.	264/118
5,023,027 A	• 6/1991	Nopper	264/37
5,240,764 A	8/1993	Haid et al.	
5,375,306 A	12/1994	Roussin-Moynier	
5,573,841 A	• 11/1996	Adam et al.	28/104
5,617,618 A	• 4/1997	Fleissner	28/103
6,007,653 A	• 12/1999	Pirinen et al.	156/148
6,058,583 A	• 5/2000	Takeuchi et al.	28/104
6,141,833 A	• 11/2000	Sorensen	19/308

#### FOREIGN PATENT DOCUMENTS

EP	0171 806	2/1986
GB	2319265	5/1998

\* cited by examiner

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#### (57) ABSTRACT

A plant serves as a mean for production of a fibre web of synthetic fibres, such as plastic fibres and absorbent fibres, such as viscose and cellulose fibres. The plant includes a forming head preliminary to lay a homogeneously and smoothly distributed fibre layer on a net shaped wire. Furthermore the plant includes a hydro-entangling section with liquid nozzles with powerful liquid jets to treat the in the forming head formed fibre layer, which consists of both synthetic—and absorbent fibres. The plant also includes an oven subsequently to thermal bond the synthetic fibres with cross bonds in the affected areas. Finally the dried web is wound up in a roller. By the help of the plant according to the invention, by higher production speed than known previously a fibre web can be produced, which is far cheaper, and which has a better and more homogeneous structure than similar conventional fibre webs.

10 Claims, 4 Drawing Sheets

